

FY 2003 PREISM Competitive Grants and Cooperative Agreements

Title: Integrating Prevention and Control of Invasive Species: Lessons from Hawaii

Principal Investigator: James Roumasset

Affiliation: University of Hawaii, University Sponsored Programs Office, Honolulu, HI

Award: \$200,000

This project will examine how to best allocate resources between excluding pests and developing management strategies for resident invaders, for three representative invasive pests: an established invader, a potentially explosive invader, and an eradicable or controllable invader.

Title: Integrating Economics and Biology for Bioeconomic Risk Assessment/Management of Invasive Species in Agriculture

Principal Investigator: Jason Shogren

Affiliation: University of Wyoming, Laramie, WY

Award: \$185,000

This project will assess three alternative frameworks for integrating economics and biology to assess the risks associated with alternative strategies for managing invasive agricultural pests.

Title: Comparing Cost, Risk and Benefit Tradeoffs Under Uncertainty: Cheatgrass Case Study

Principal Investigator: Dennis M. King

Affiliation: University of Maryland, Cambridge, MD,

Award: \$87,500

This study will demonstrate and assess the use of spatial databases to analyze potential economic impacts and possible irreversible effects associated with exotic weed invasions.

Title: The Feasibility of Indemnification and Check-off Funded Programs to Manage Invasive Species Risks in Agriculture

Principal Investigator: Barry K. Goodwin

Affiliation: North Carolina State University, Raleigh, NC

Award: \$158,000

This study will evaluate economic issues associated with the design and operation of voluntary insurance and mandatory check-off programs that provide assistance for agricultural producers' management of risks associated with invasive species.

Title: Commodity Programs, Distorted Markets and Economic Consequences of Invasive Species Policies

Principal Investigator: Daniel A. Sumner

Affiliation: University of California, Davis, CA

Award: \$75,000

This project will examine the economic implications of invasive species policies within the context of trade and agricultural policies, such as tariffs, commodity programs, and crop insurance.

Title: Biology and Economics of Invasive Species: Spatial and Temporal Interactions

Principal Investigator: Colin A. Carter

Affiliation: University of California, Davis, CA

Award: \$145,000

This project will examine whether and how the relationships between biological and economic activity suggest that different pest management objectives and techniques are favored during different times over the course of an invasion.

Title: Economics of Managing Infectious Wildlife Disease When Livestock Are at Risk

Principal Investigator: Richard D. Horan

Affiliation: Michigan State University, East Lansing, MI

Award: \$129,000

This study will evaluate the economic effects of bovine tuberculosis controls and how these effects might vary with efforts by ranchers or regulatory authorities to reduce the risks of disease transmission.

Title: Randomly Introduced Biological Invasions: The Economics of Prevention and Control

Principal Investigator: Lars J. Olson

Affiliation: University of Maryland, College Park, MD

Award: \$119,000

This analysis will characterize for program decision makers how policies for optimally managing an invasive agricultural pest depend on the process of introduction, the ecological conditions that govern establishment and spread, the economic damages associated with invasion, and the costs of prevention and control activities.

Title: Design of Systems Approaches to Invasive Pest Risk Management

Principal Investigator: David Orden

Affiliation: Virginia Polytechnic Institute, Blacksburg, VA,

Award: \$108,000

This project will evaluate different risk management strategies involving the sequential use of safeguards, such as field surveys and packinghouse restrictions in exporting countries, to reduce trade-related invasive pest risks to a desired level with minimal disruptions to trade.

Title: Modeling the Effects of Invasive Species on the International Trade of Forest Products

Principal Investigator: Jeffrey P. Prestemon

Affiliation: USDA Forest Service, Southern Research station, Asheville, NC

Award: \$101,981

This study will examine the economic effects on producers and consumers of forestry products, including downstream manufacturing industries, of regulations aimed at preventing the importation of invasive species that threaten U.S. forest resources.

Title: Tradeoffs and Resource Allocation Effects for Alternative IS Management Policies

Principal Investigator: Thomas I. Wahl

Affiliation: Washington State University, Pullman, WA

Award: \$100,000

This project will develop bioeconomic models to examine the costs and benefits of alternative invasive species management strategies conducted in foreign countries, at U.S. ports of entry, and within the United States.

Title: Controlling Exotic Species Introductions: Trade Related Policies and Exposure

Principal Investigator: Christopher J. Costello

Affiliation: University of California, Santa Barbara, CA

Award; \$68,000

This project will determine the economic effects of various risk mitigation policies, given that U.S. exposure to invasive pests may vary with the ecological characteristics of its trade partners and the economic structure of the industries producing traded goods.